VEIRA

MULTIBAND COMPRESSOR

VEIRA Multiband Gold

User Manual

The smooth one of the four VEIRA colour multiband compressors: four bands, each held by an optical-style cell that lets go softly after long, heavy compression instead of pumping, with crossovers you drag, mid or side per band, zero latency or LINEAR PHASE, and an external key.



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Welcome

Thank you for choosing **VEIRA Multiband Gold**. It splits your sound into **four bands** with three crossovers you drag on the display, and gives each band its own compressor: THRESHOLD, RATIO, ATTACK, RELEASE and MAKEUP (or AUTO). A kick can be held in the lows while the vocal above it doesn't move; a harsh moment in the upper mids can be held without dulling the cymbals.

It is the smooth one of the four VEIRA colour multiband compressors, and it is painted like the rest of the Gold family: brushed gold with dark print and black knobs. Each band is held the gold way, by an **optical-style cell**: it follows ATTACK and RELEASE, and after long, heavy compression it lets go with a soft tail instead of pumping.

What makes it different

- **Optical release in every band.** A fast part follows your RELEASE; a slow part holds up to 30 % of a long reduction and lets go over five times RELEASE. Short hits come back quickly; long, heavy passages come back gently.
- **A wide, soft knee.** 10 dB wide in every band, so the compression fades in.
- **Crossovers you drag**, right on the display, from 30 Hz to 16 kHz. The four bands add up flat: 0.0000 dB from 25 Hz to 18 kHz.
- **Zero latency, or LINEAR PHASE.** By default nothing is delayed; LINEAR PHASE splits with linear-phase filters that add up to a pure delay, for mix buses and masters.
- **Stereo, mid or side, per band.** In Mid or Side only that part of the band is detected and changed; the other part passes with no change at all.
- **An external key, band by band.** With EXT KEY each band listens to the same band of the sidechain: a kick can duck only the music's lows.
- **See every band.** The BANDS display draws the spectrum in and out and the whole compressor's gain right now; each band's card shows its reduction.
- **40 factory presets** in 10 folders, level-matched to bypass.

How this manual is organised. *Getting started* installs and activates the plugin. *The panel at a glance* names its parts. *How a multiband compressor works* explains the idea and what happens inside. *Controls*, *Zero latency and LINEAR PHASE*, *Mid, side and the sidechain* and *Displays* explain every control and graph. *Presets*, *Recipes*, *Specifications* and *Troubleshooting* close the manual.

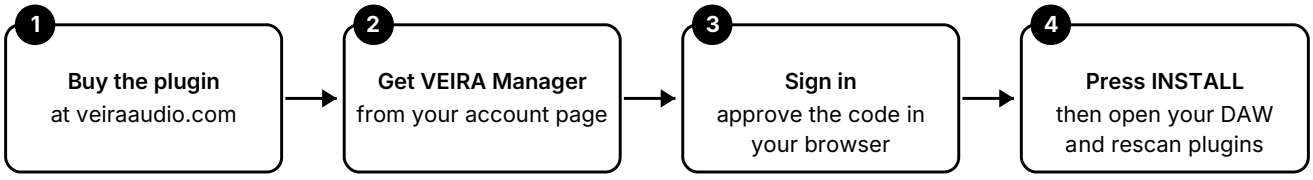
Getting started

What you need

macOS	macOS 11 Big Sur or later. Native on Apple silicon and Intel Macs (universal).
Windows	Windows 10 or 11, 64-bit.
Plugin formats	VST3 (macOS and Windows), Audio Units (macOS), and a standalone app. Pro Tools (AAX) versions arrive once they are signed for Pro Tools.
Hosts	Any DAW that loads VST3 or Audio Units: Logic Pro, Cubase, Nuendo, Ableton Live, Studio One, Reaper, FL Studio, Bitwig and others.
Account	A VEIRA account at veiraaudio.com, and the free **VEIRA Manager** app.
Internet	Needed to install and to refresh the licence. The plugin itself never goes online.

Install with VEIRA Manager

VEIRA plugins are not downloaded from the website one by one. You install them with **VEIRA Manager**, the free VEIRA app that installs, updates and activates everything you own. Its own manual covers it in full; the short version is:



One account works on up to three computers. Updates are free for life.

FIGURE 1 From purchase to first sound in four steps.

1. **Buy** VEIRA Multiband Gold at **veiraaudio.com**. It's a one-time purchase: you own it for good, with free updates.
2. **Download VEIRA Manager** from your account page (or veiraaudio.com/manager) and install it.
3. **Sign in.** VEIRA Manager shows a short code and opens your browser; confirm the code there. Your password is never typed into the app.
4. Find VEIRA Multiband Gold in the list and press INSTALL. When it says SHOW, it's installed. Open your DAW and let it rescan its plugins.

After installing, VEIRA Multiband Gold appears in your DAW under the manufacturer **VEIRA** (in Logic Pro: Audio Units ▸ VEIRA ▸ VEIRA Multiband Gold).

Activation and the licence

VEIRA Manager keeps a licence on your computer that the plugins check. It is refreshed every time VEIRA Manager opens and stays valid for 30 days offline, so you can work without internet as long as you open VEIRA Manager now and then.

Without a valid licence, VEIRA Multiband Gold still loads and works, but **its sound fades out for 1.5 seconds every 30 seconds**, and a strip along the bottom of its window says why (for example, *NOT ACTIVATED ON THIS COMPUTER. SIGN IN WITH VEIRA MANAGER.*). Clicking the strip opens your account page.

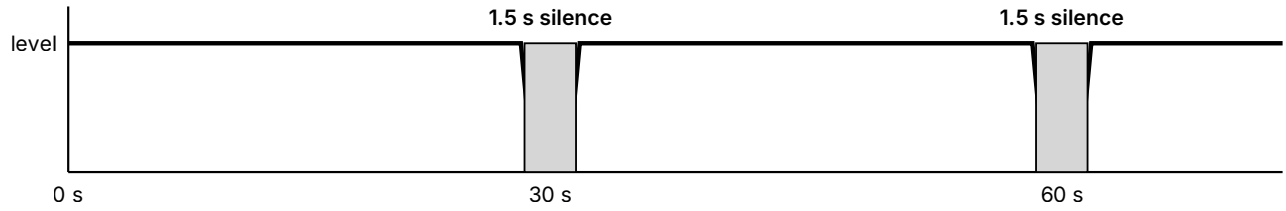


FIGURE 2 What an unlicensed copy does. With a valid licence the audio is never touched.

- **Activating while your DAW is open** takes effect within about two minutes. You don't need to reload the plugin.
- **"Not activated on this computer"**: open VEIRA Manager and sign in.
- **"Expired"**: open VEIRA Manager while online; it renews the licence at once.
- **"Not included"**: the signed-in account doesn't own VEIRA Multiband Gold. Check that you're signed in with the account you bought it with.

Formats and where the files go

VEIRA Manager puts every format in the standard place, so you never need to copy files by hand:

Format	macOS	Windows
VST3	`~/Library/Audio/Plug-Ins/VST3` (just for me, the default) or `/Library/Audio/Plug-Ins/VST3` (all users)	`C:\Program Files\Common Files\VST3` (all users, the default) or `%LOCALAPPDATA%\Programs\Common\VST3`
Audio Units	`~/Library/Audio/Plug-Ins/Components` or `/Library/Audio/Plug-Ins/Components`	(Audio Units are macOS only)
Standalone	`~/Applications/VEIRA` or `/Applications/VEIRA`	`C:\Program Files\VEIRA` or `%LOCALAPPDATA%\Programs\VEIRA`

You choose *just for me* or *all users* in VEIRA Manager's install settings.

The standalone app runs VEIRA Multiband Gold on its own, with your audio interface's input and output, which is handy for trying presets without a DAW.

The panel at a glance



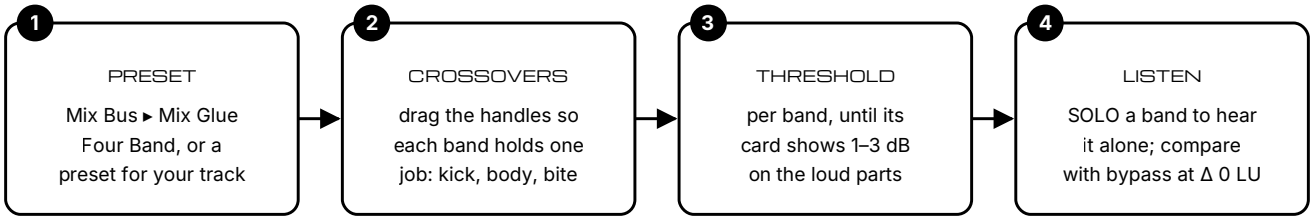
FIGURE 3 VEIRA Multiband Gold with *Default* ▸ *Init* on a mix: every band at THRESHOLD −24 dBFS, 2.5:1, ATTACK 20 ms, RELEASE 200 ms, band 2 selected.

	Part	What it does
1	Preset browser	Steps through and saves presets. See *Presets*.
2	Size button	The window's size: 75 to 200 %, or *Fit to screen*.
3	BANDS	The spectrum in and out, the whole compressor's gain right now, and the crossovers.
4	Crossover handles	Drag them to move the three crossovers.
5	Band cards	One per band: its range, its reduction now, SOLO and BYPASS. Click a card to show its controls.
6	Meter bridge	IN and OUT meters with short-term and integrated loudness.
7	The selected band	THRESHOLD, RATIO, ATTACK, RELEASE and MAKEUP of the band you clicked.
8	STEREO	Whether the band works on both channels, its mid or its side.
9	AUTO	Sets the band's MAKEUP from its THRESHOLD and RATIO.
10	ALL BANDS	MIX (parallel compression) and OUTPUT.

	Part	What it does
11	LINEAR PHASE	Linear-phase crossovers instead of zero latency.
12	EXT KEY	Each band listens to the same band of the sidechain input.

The window has the BANDS display at the top and the meter bridge at the right. The four band cards sit under the display, BAND 1 (the lows) on the left to BAND 4 (the highs). Below them are the controls of the selected band and, at the right, ALL BANDS.

Quick start: a mix bus in four moves

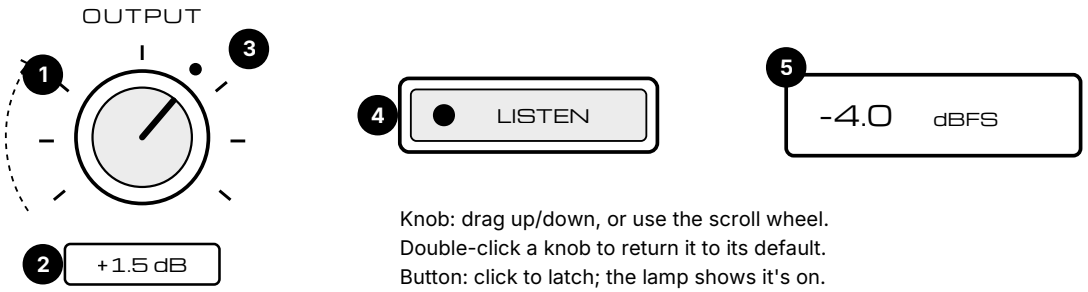


Each preset's OUTPUT is set so it comes out as loud as it went in: you hear the control, not a change of level.

FIGURE 4 The quickest way to glue. *Default* ▸ *Init* starts with every band at 2.5:1 over −24 dBFS.

Using the controls

Every VEIRA plugin is played like a piece of hardware. The same few parts appear on every panel:



Knob: drag up/down, or use the scroll wheel.
Double-click a knob to return it to its default.
Button: click to latch; the lamp shows it's on.
Readouts always carry a unit (dB, dBFS, LUFS, LU, ms, %).

FIGURE 5 The parts you'll find on every VEIRA panel (the labels are examples).

- 1 **Knob.** Drag up to turn it clockwise, down to turn it back, or use your mouse wheel. **Double-click** returns it to its default. The engraved pointer and the small dot on the scale show where it's set.
- 2 **Value window.** The backlit window under each knob shows its exact value with its unit.
- 3 **Silkscreen label.** The control's name, as it appears in your DAW's automation list.
- 4 **Push button.** Click to switch on; the lamp lights and the cap sits lower in its bezel. Click again to switch off.

- (5) **Readout.** Live numbers update ten times a second so you can read them while the meters move. A value over 0 dBFS shows as a warning.

Tooltips: hover over any control or display for a short explanation. On displays, the tooltip depends on where you point.

Automation: every knob and button is a host parameter, so you can automate it in your DAW and control it from a MIDI controller or control surface that your DAW maps.

Units: VEIRA never shows a bare number. **dBFS** is level against digital full scale (0 dBFS is the loudest a digital signal can be); **dB** is a change in gain; **LUFS** is loudness as streaming services and broadcasters measure it; **LU** is a difference in loudness (1 LU = 1 dB).

On VEIRA Multiband Gold's panel the parts look a little different from the drawing above:

- **Knobs show their value in the middle** ([-24.0 dB], [2.5:1], [20 ms]): the knobs are black, and a dark ring printed on the gold around each one (in print, the dark arc) shows how far it is turned. The control's name is printed under the knob. In the knob [THRESHOLD] reads in dB; your DAW and the tooltip show it in dBFS.
- **One band's controls at a time.** Click a band's card (or the band on the [BANDS] display) and its knobs appear under the caption [BAND 1] to [BAND 4]. The selected card has a gold outline. The plugin remembers which band was selected.
- **SOLO and BYPASS are icons** on each card: the headphones are [SOLO], the power symbol is [BYPASS]. Off, they are light symbols in a dark well; on, they turn dark on gold ([SOLO]) or on red ([BYPASS]). Rest the pointer on them for their names.
- **Buttons have no lamp:** [AUTO], [LINEAR PHASE] and [EXT KEY] fill with dark ink when they are on (in print, a dark button); off, they are light buttons with dark lettering.
- **STEREO is a menu:** click the dark window to choose [Stereo], [Mid] or [Side].
- **Type a value:** right-click a knob (Control-click on a Mac). A field opens with the current value; type the new one and press Return. The number is enough: **−30** for a threshold of −30 dBFS, **4** for a ratio of 4:1, **1.5 s** or **1500** for a release of 1.5 seconds. Double-click a knob for its default.
- **Tooltips:** rest the pointer on a control or a display for a short note on what it does.
- **The window size.** VEIRA Multiband Gold opens at 100 %, 1200 × 700 points, so it fits a 1280 × 800 screen. To change it, click the size button (2) in the header and choose 75, 90, 100, 125, 150 or 200 % or *Fit to screen* (sizes that don't fit your display are left out); or drag the grip in the bottom-right corner (double-click it for 100 %); or press Cmd + [=] and Cmd + [-] (Ctrl on Windows) to step up and down and Cmd + [0] for 100 %. Your DAW saves the size with the session, and new instances open at the size you chose last.
- **The face:** brushed gold with dark print and black knobs. The [BANDS] display, the band cards, the meter bridge and the preset window are dark screens set into the gold. Every text is at least 12 points and stands at least 4.5:1 against its ground (the WCAG AA contrast for text).

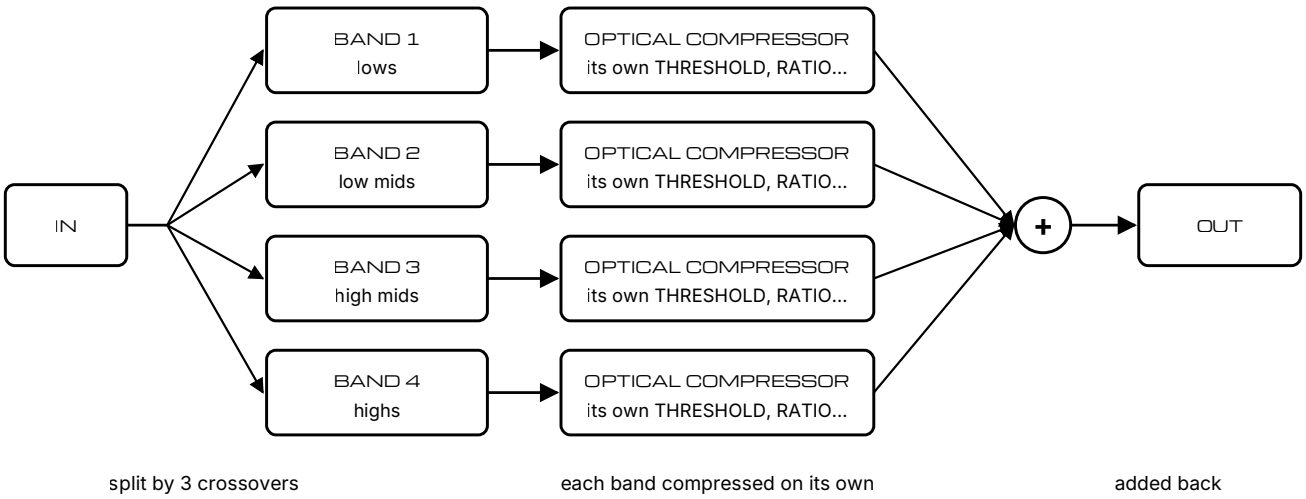
Where to put VEIRA Multiband Gold

Use it as an insert on a mix bus, a drum bus, a master, or a track whose balance changes with the playing: a bass, a vocal, a piano, a guitar. At zero latency it is fine while you record and play. On a master, put it before the limiter; with [LINEAR PHASE] your DAW compensates the latency for you.

How a multiband compressor works

One compressor per band

A plain compressor turns the whole signal down when it gets loud. On a full mix that means a loud kick pulls the vocal and the cymbals down with it. A multiband compressor first **splits the sound into bands** by frequency, compresses each band on its own, and adds them back together. Each band only reacts to what happens in its own range.

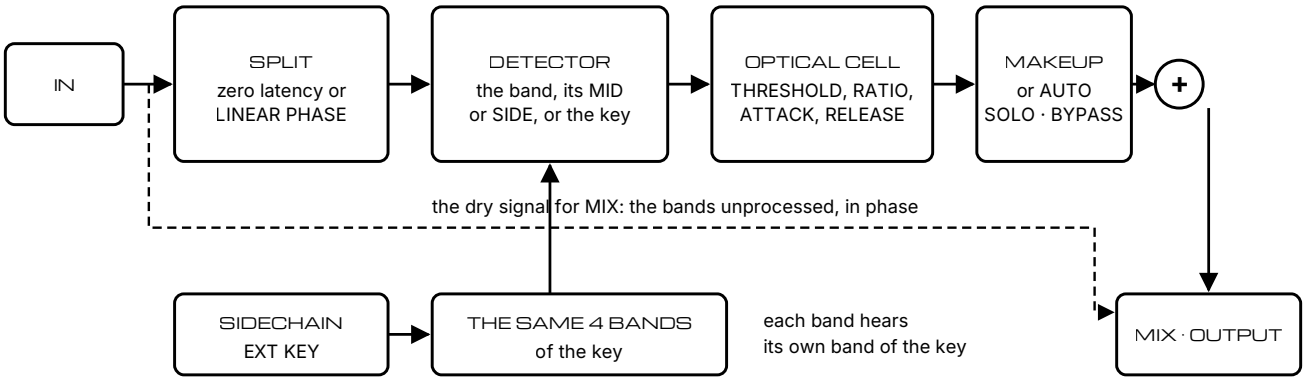


A kick can be held in band 1 while the vocal in bands 2 and 3 doesn't move, and a harsh cymbal can be held in band 4 without dulling everything below it.

FIGURE 6 The idea: split, compress each band on its own, add back.

The split is made by **crossovers**: filters that hand the frequencies below a point to one band and those above to the next. Good crossovers add back up to exactly the input when nothing is compressed, so the plugin is transparent until a band acts.

What happens inside VEIRA Multiband Gold



One detector and one optical cell per band. Zero latency by default; LINEAR PHASE adds 1152 samples at 44.1 or 48 kHz (24 ms at 48 kHz), reported to your DAW.

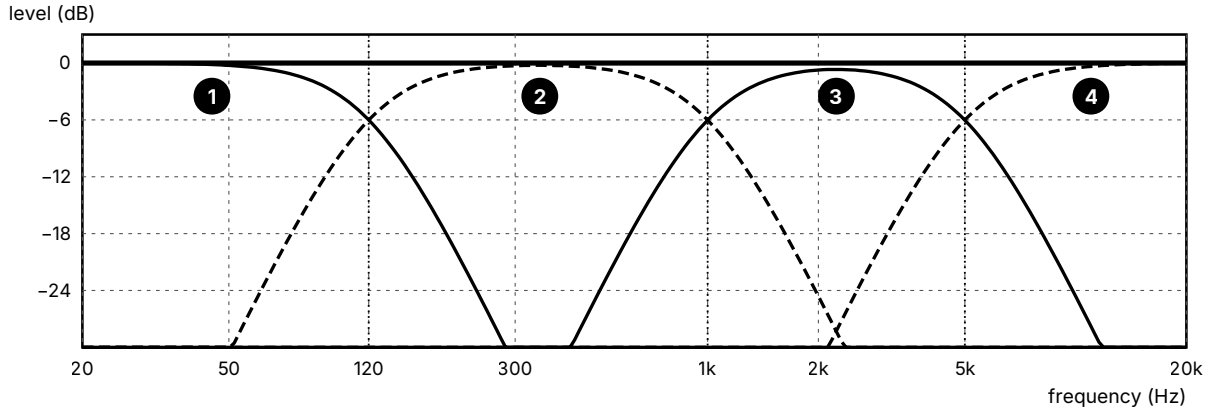
FIGURE 7 The signal flow, for each of the four bands.

1. **The split.** Three crossovers divide the sound into four bands: zero latency by default, or LINEAR PHASE.
2. **The detector.** Each band's level is its power averaged over about 1.6 cycles of its lowest frequency (1 to 25 ms; a sine reads its peak), both channels linked; or only its mid or its side; or, with EXT KEY, the same band of the sidechain input.
3. **The gain computer.** Over THRESHOLD the band is turned down at RATIO, with a 10 dB soft knee, by at most 40 dB.
4. **The optical cell.** The reduction follows at ATTACK and lets go at RELEASE, while a slow part holds up to 30 % of it and lets go over five times RELEASE.
5. **Makeup.** Each band gets its MAKEUP (or AUTO); SOLO and BYPASS act here.
6. **The sum, MIX and OUTPUT.** The bands are added back, blended with the unprocessed bands by MIX, and OUTPUT sets the level.

Every gain and crossover change glides over 20 ms, so nothing clicks while you move a control.

Controls

The crossovers



The default crossovers, 120 Hz, 1 kHz and 5 kHz: Linkwitz-Riley, 24 dB per octave each side, −6 dB at the crossover. Thick: the four bands added, flat (0.0000 dB) from 25 Hz to 18 kHz. Each handle has its own range.

FIGURE 8 The default crossovers and the four bands they make.

Drag a crossover's handle (the small disc at the bottom of the BANDS display) left or right. While you drag or hover, its frequency is shown above it. Double-click a handle to put it back at its default.

Crossover	Range	Default
CROSSOVER 1	30 to 500 Hz	120 Hz
CROSSOVER 2	200 Hz to 4 kHz	1 kHz
CROSSOVER 3	1 to 16 kHz	5 kHz

The crossovers are kept in order and at least 1.25 times apart, so the bands never overlap or vanish. Each band card shows its range (20-120 Hz, 120-1.0k Hz …). Band 1 runs from the bottom of the audio band up to CROSSOVER 1, band 4 from CROSSOVER 3 to the top.

Where to put them. Give each band one job. On a mix: band 1 the kick and the bass (under 100–150 Hz), band 2 the body (up to about 1 kHz), band 3 presence and bite, band 4 the cymbals and the air (from about 5 kHz). On a vocal: band 1 the boom and plosives, band 2 the body, band 3 the harsh edge, band 4 the air.

BAND: THRESHOLD, RATIO, ATTACK, RELEASE and MAKEUP

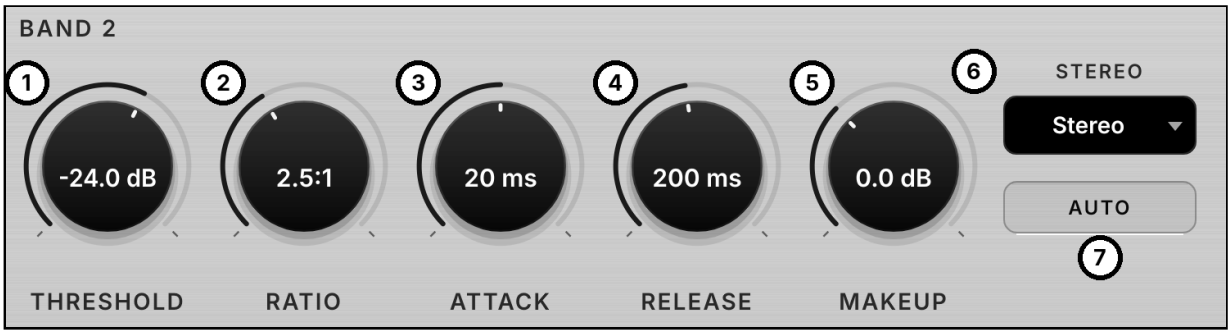
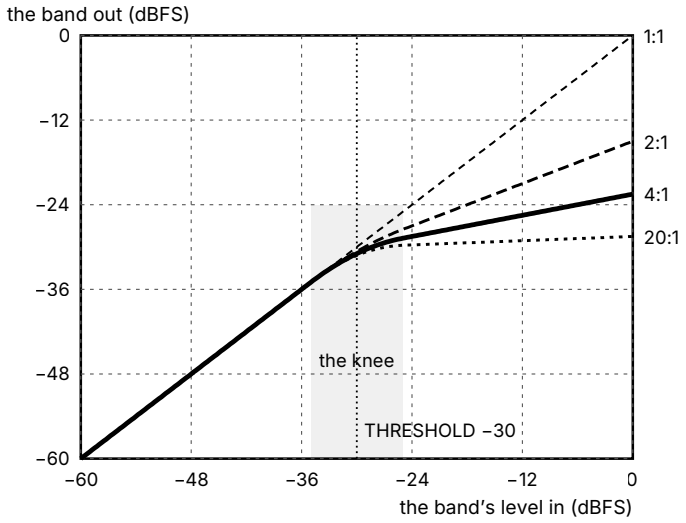


FIGURE 9 The selected band's controls, here band 2: 1 THRESHOLD, 2 RATIO, 3 ATTACK, 4 RELEASE, 5 MAKEUP, 6 STEREO and 7 AUTO.

Control	Range	Default	What it does
THRESHOLD	−60 to 0 dBFS	−24.0 dBFS	Where the band starts to be turned down, against its own level.
RATIO	1:1 to 20:1	2.5:1	How hard the band is turned down over THRESHOLD.
ATTACK	0.5 to 200 ms	20 ms	How quickly the reduction comes in.
RELEASE	10 ms to 3 s	200 ms	How quickly it lets go (the fast part; see below).
MAKEUP	−12 to +24 dB	0.0 dB	The band's gain after the compressor.
AUTO	on, off	off	Sets MAKEUP for you from THRESHOLD and RATIO.
STEREO	Stereo, Mid, Side	Stereo	Which part of the band is detected and changed. See *Mid, side and the sidechain*.

THRESHOLD and RATIO. Each band compares its own level, in dBFS, with THRESHOLD. Over it, the band is turned down at RATIO: at 4:1 it comes out only 1 dB louder for every 4 dB it rises. A wide **10 dB soft knee** lets the ratio rise gradually, from 5 dB under the threshold to 5 dB over it, so the compression fades in. The reduction is at most 40 dB. Watch each band's card while you set its threshold:

- **1–3 dB:** glue. The mix bus and mastering presets sit here.
- **3–6 dB:** a band held firmly: a booming bass note, a harsh vocal, a snare's body.
- **10 dB and more:** an effect: dense, squashed, breathing.

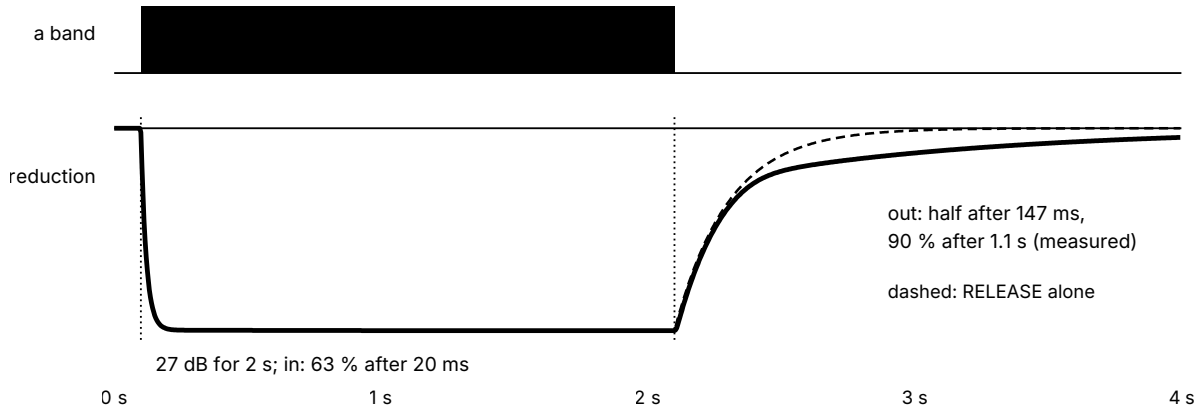


RATIO 1:1 to 20:1 with a wide 10 dB soft knee, against the band's own level in dBFS (a sine reads its peak), at most 40 dB.

Measured at 4:1 over −30 dBFS: within 0.08 dB of this curve. The knee lets the ratio rise gradually: 5 dB under THRESHOLD the band starts to move; 5 dB over it the full ratio is reached.

FIGURE 10 A band's curve with THRESHOLD at −30 dBFS, at 2:1 (dashed), 4:1 (solid) and 20:1 (dotted).

ATTACK and RELEASE: an optical cell. The reduction comes in at ATTACK and lets go at RELEASE, as in any compressor. Then the gold part: a **slow part** holds up to 30 % of the reduction. It charges over about 0.3 s while the band stays loud, and lets go over **five times** RELEASE. The two combine smoothly. After a short hit only the fast part has moved, so the band comes back at RELEASE; after a long, heavy passage the slow part lets go last, with a soft tail, so the band doesn't pump back up.



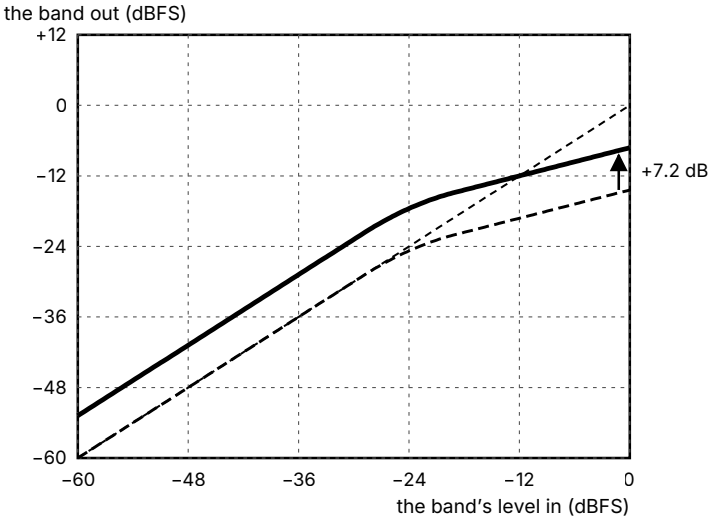
Computed with the plugin's detector and optical cell at ATTACK 20 ms and RELEASE 200 ms. The fast part follows ATTACK and RELEASE; a slow part holds up to 30 % of the reduction (charging over 0.3 s) and lets go over 5 × RELEASE. After long, heavy compression the band comes back with a soft tail instead of pumping; after a short hit, RELEASE rules.

FIGURE 11 The optical release, computed with the plugin's cell and checked against the measurement.

- **Fast** ATTACK **(0.5–5 ms):** catches transients: plosives, cymbal peaks, fret noise.
- **Medium** ATTACK **(10–30 ms):** lets the start of each note through, then holds the body. The default, 20 ms, is measured to reach 63 % of the reduction in 20 ms.
- **Short** RELEASE **(60–150 ms):** quick recovery for bright bands and fast material.
- **Long** RELEASE **(250–400 ms and more):** smooth, slow glue for pads, piano and mix buses. Remember the slow part lets go over five times this.

Each band's detector averages over about 1.6 cycles of the band's lowest frequency (1 to 25 ms), so even a fast ATTACK follows the level of the notes rather than every wave of the bass.

MAKEUP and AUTO. MAKEUP sets the band's gain after the compressor, from −12 to +24 dB. With AUTO on, the plugin sets it for you: half of what the band's curve takes from a full-scale (0 dBFS) sine. That is a level-independent estimate that keeps the band near its own level while its range shrinks; the MAKEUP knob's own setting is then not used.



AUTO sets MAKEUP from THRESHOLD and RATIO: half of what the band's curve takes from a full-scale (0 dBFS) sine. Here THRESHOLD −24 dBFS at 2.5:1 (the defaults) takes 14.4 dB at 0 dBFS, so AUTO gives back 7.2 dB.

Dashed: the curve alone; solid: with AUTO. Loud parts stay a little under where they were, quiet ones come up: the band keeps about its level while its range shrinks.

FIGURE 12 What AUTO does to a band's curve.

> **Tip:** MAKEUP also works as a dynamic EQ: a band with a little makeup and a gentle ratio lifts that range when it is quiet and holds it when it is loud. *Drums* ▸ *Snare Body* brings up a snare's body this way.

BAND CARDS: SOLO and BYPASS



FIGURE 13 The band cards, here on band 4: 1 the band and its range, 2 its reduction now (the value at the left, the bar from the right), 3 SOLO and 4 BYPASS. Band 2 is selected: its card has a gold outline.

Control	Range	Default	What it does
SOLO (headphones)	on, off	off	Hear only the soloed bands. A listening aid: offline bounces leave it out.
BYPASS (power symbol)	on, off	off	The band passes untouched: no compression and no makeup.

Each card shows the band's range and its **gain reduction now**: the value in dB in red at the left, and a red bar on a 0 to 24 dB scale that grows from the right.

SOLO plays only the soloed bands; solo two or more to hear them together. Use it to set the crossovers (solo band 1 and drag CROSSOVER 1 until the kick and bass are in it and the guitars aren't) and to hear what a band's compressor is doing. Offline bounces always leave it out, so a bounce never comes out as one band by mistake.

BYPASS takes one band out of the compressor: it passes at its own level, its makeup ignored, and the display's band label reads BYPASS. Compare with and without, band by band.

SOLO, BYPASS and MIX fade over 20 ms, so they never click.

ALL BANDS: MIX, OUTPUT, LINEAR PHASE and EXT KEY

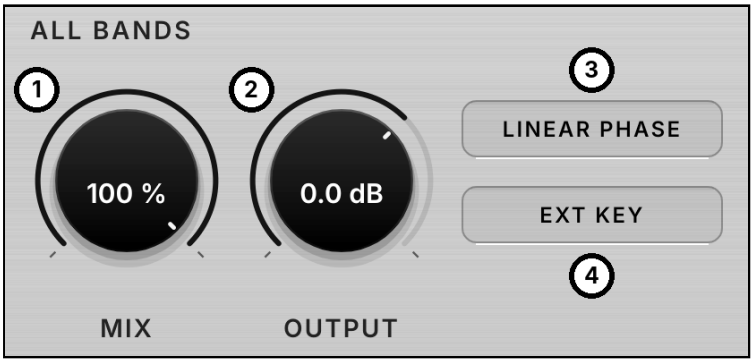


FIGURE 14 ALL BANDS: 1 MIX, 2 OUTPUT, 3 LINEAR PHASE and 4 EXT KEY.

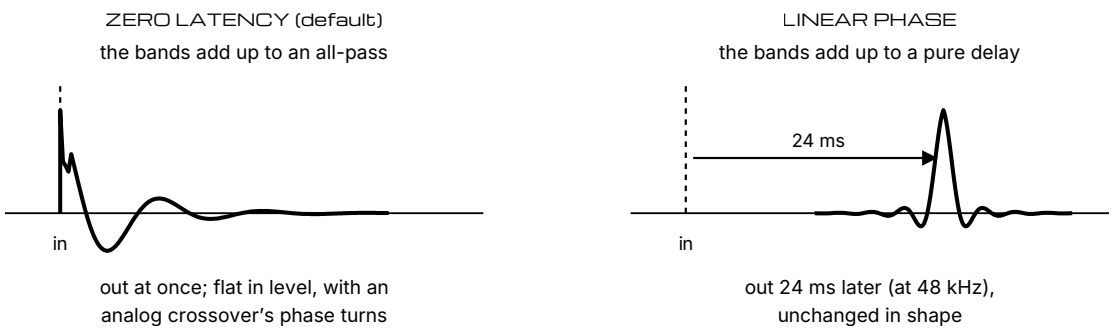
Control	Range	Default	What it does
MIX	0 to 100 %	100 %	Parallel compression: the compressed bands against the unprocessed ones, in phase.
OUTPUT	−24 to +12 dB	0.0 dB	The level after everything.
LINEAR PHASE	on, off	off	Linear-phase crossovers (latency) instead of zero latency.
EXT KEY	on, off	off	Each band listens to the same band of the sidechain input.

MIX blends the compressed bands with the same bands unprocessed. Because both come from the same split, the blend stays in phase at any setting: no comb filtering. Below 100 % the quiet details come up under the held peaks, as in parallel compression. With LINEAR PHASE on, the dry part is the input delayed by the latency, and at MIX 0 % the output is that input, bit for bit.

OUTPUT sets the final level. Set it until the meter bridge's Δ INTEGRATED reads about 0.0 LU, then compare with your DAW's bypass.

LINEAR PHASE and **EXT KEY** have their own chapter, next.

Zero latency and LINEAR PHASE



Drawn roughly: what an impulse looks like after each split, with no compression. Zero latency turns the phase near the crossovers, as an analog crossover does; LINEAR PHASE keeps the waveform's shape at the cost of latency.

FIGURE 15 The two ways to split, compared on an impulse.

Zero latency (the default). The bands are split by Linkwitz-Riley crossovers, 24 dB per octave, in a cascade: they add up flat in level, as an analog crossover does, and they turn the phase near the crossover frequencies. Nothing is delayed, so it is the choice while you record and play, and on single tracks.

LINEAR PHASE. The bands are split by four linear-phase filters, 48 dB per octave, that add up to a pure delay: the waveform keeps its shape, and with nothing compressed the output is the input, only later. The latency is constant and reported to your DAW, which compensates it:

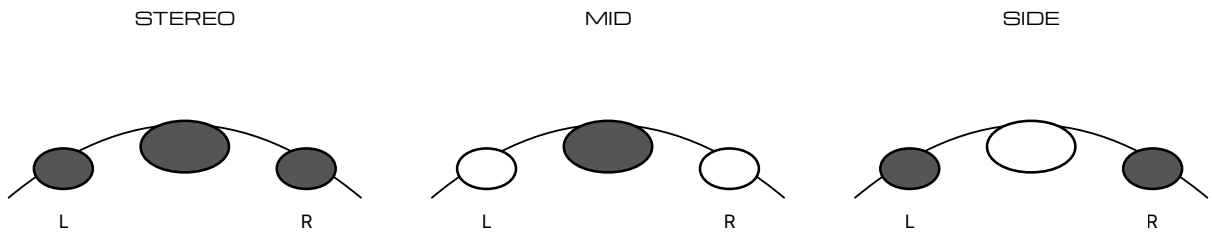
Sample rate	Latency
44.1 / 48 kHz	1152 samples (24 ms at 48 kHz)
88.2 / 96 kHz	2304 samples
176.4 / 192 kHz	4608 samples

Use it on mix buses and masters, where the phase near a crossover matters: every Mastering preset uses it. The bands are also better separated: +12 dB of MAKEUP on band 3 moved the next band's tone by 0.9 dB at zero latency and by 0.08 dB in linear phase.

Switching LINEAR PHASE fades out, switches and fades back in. Because it changes the latency, it is not automatable: set it before you play, and on some DAWs stop and start playback after switching so they pick up the new latency.

Mid, side and the sidechain

STEREO: Stereo, Mid or Side per band



Dark: the part the band works on; white: the part that passes untouched. Measured: in MID or SIDE the other part changes by 0.0000 dB. Each band has its own STEREO setting, so the lows can be held on the mid and the highs on the sides.

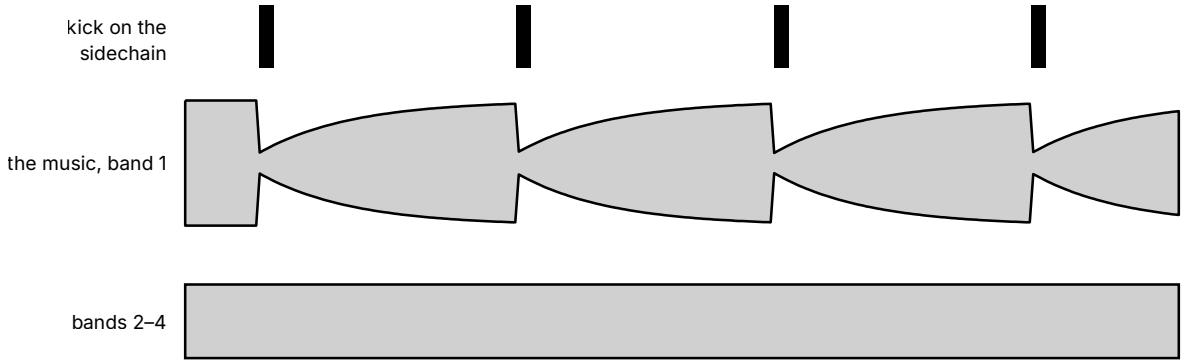
FIGURE 16 What each [STEREO] setting works on.

Each band has its own [STEREO] menu:

- [Stereo]: both channels are detected together and get the same gain, so the stereo image never moves.
- [Mid]: only the centre of the band (left plus right) is detected and changed, makeup included. The sides pass untouched.
- [Side]: only the sides of the band (left minus right) are detected and changed. The centre passes untouched.

Measured, the part that isn't chosen changes by 0.0000 dB. Use [Mid] to hold a centred bass or kick without touching the width above it; use [Side] to even out wide guitars, pads or cymbals that jump out of the sides. *Mix Bus* ▸ *Mix Side Control* evens the sides only; *Mastering* ▸ *Master Mid Side Glue* holds the lows on the mid and the highs on the sides. On a mono track, [Mid] works on the whole band and [Side] has nothing to work on.

EXT KEY: the sidechain



With EXT KEY on, each band listens to the same band of the sidechain. Here only band 1 compresses: the music's lows dip under each kick (16 dB in the test) while the bands above don't move. Drawn roughly.

FIGURE 17 A kick on the sidechain ducks only the music's lows.

With EXT KEY on, every band listens to **the same band of the sidechain input** instead of its own signal: band 1 of the music is turned down when band 1 of the key is loud, and so on. A kick on the key can duck only the lows of a bass or a mix, while the mids and highs don't move; a voice on the key can clear only the voice range of the music.

Routing. Insert VEIRA Multiband Gold on the track to be ducked, then send the key (a kick, a voice) to the plugin's sidechain input, mono or stereo. Every DAW does this a little differently: in Logic Pro choose the key track in the plugin header's *Side Chain* menu; in Cubase and Nuendo activate the side-chain and add a send to it; in Ableton Live open the plugin's sidechain section; in Pro Tools choose a bus under *Key Input* (once the AAX version arrives). Then switch EXT KEY on and set each band's THRESHOLD against the key's level.

The Sidechain presets are made for this: *Kick Ducks Bass*, *Kick Pump Lows*, *Voice Over Duck* and *Vocal Space In Mix*. They duck by design, so they come out quieter than they go in.

Displays

BANDS

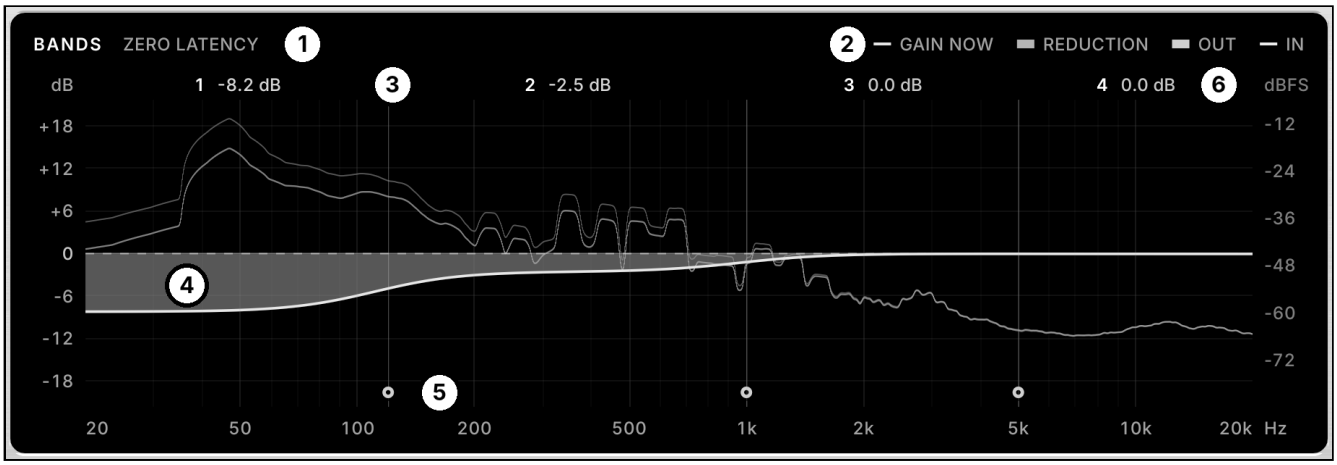


FIGURE 18 The BANDS display: 1 its title and the split (ZERO LATENCY), 2 the key, 3 each band's number and what it does now, 4 the reduction, 5 a crossover handle, and 6 the spectrum's dBFS scale.

The BANDS display shows **20 Hz to 20 kHz**:

- **The spectrum.** The input (IN, a thin light line) and the output (OUT, the gold line; in print, the darker line), smoothed to sixth-octaves, fast up and slow down, on the dBFS scale at the right.
- **The gain now** (GAIN NOW, the bright gold line; in print, the thick light line): the whole compressor's gain right now, each band's gain spread across its range, on the dB scale at the left (−18 to +18 dB). The dashed line shows each band's MAKEUP alone.
- **The reduction** (REDUCTION, orange; in print, the shaded area): what the bands are turning down right now, filled between the dashed makeup line and the gain line. It shows exactly which frequencies are being held.
- **Over each band** its number and what its dynamics are doing now, in dB (1 -8.2 dB); BYPASS for a bypassed band. A band that isn't heard because another band is soloed is dimmed.
- **The crossovers:** a faint vertical line and a handle at the bottom for each. Drag a handle to move it; its frequency is shown while you drag or hover.

The title shows the split in use: ZERO LATENCY or LINEAR PHASE. **Click a band** on the display to select it. **Hover** anywhere else for a read-out of the frequency under the pointer, the gain there now (NOW) and the makeup alone (MAKEUP).

What to look for. On a mix, a band whose reduction swings deep on every kick and comes back between hits is pumping: raise its THRESHOLD, or lengthen its RELEASE. A band that never shows any reduction isn't doing anything: lower its THRESHOLD or bypass it.

Meter bridge (IN | OUT)

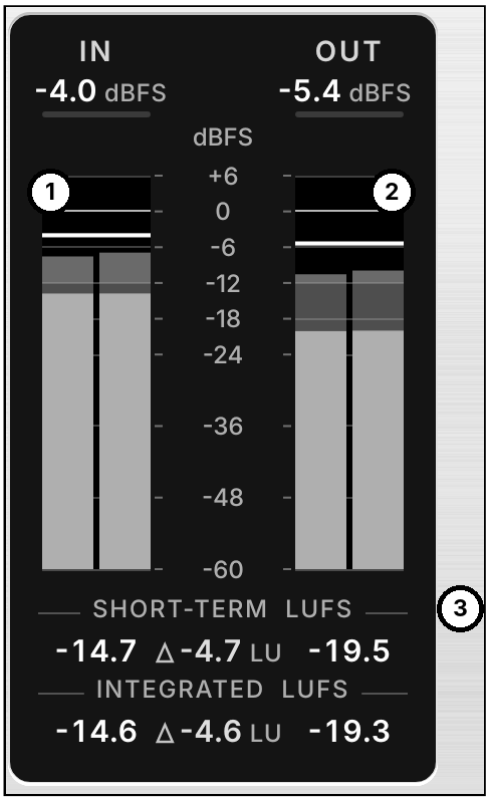


FIGURE 19 The meter bridge: 1 IN and 2 OUT, with 3 short-term and integrated loudness.

Reading the IN and OUT meters

The meter bridge measures what goes into VEIRA Multiband Gold and what comes out, in level and in loudness. The drawing shows the input and output columns; any extra column on your plugin's bridge is described above.

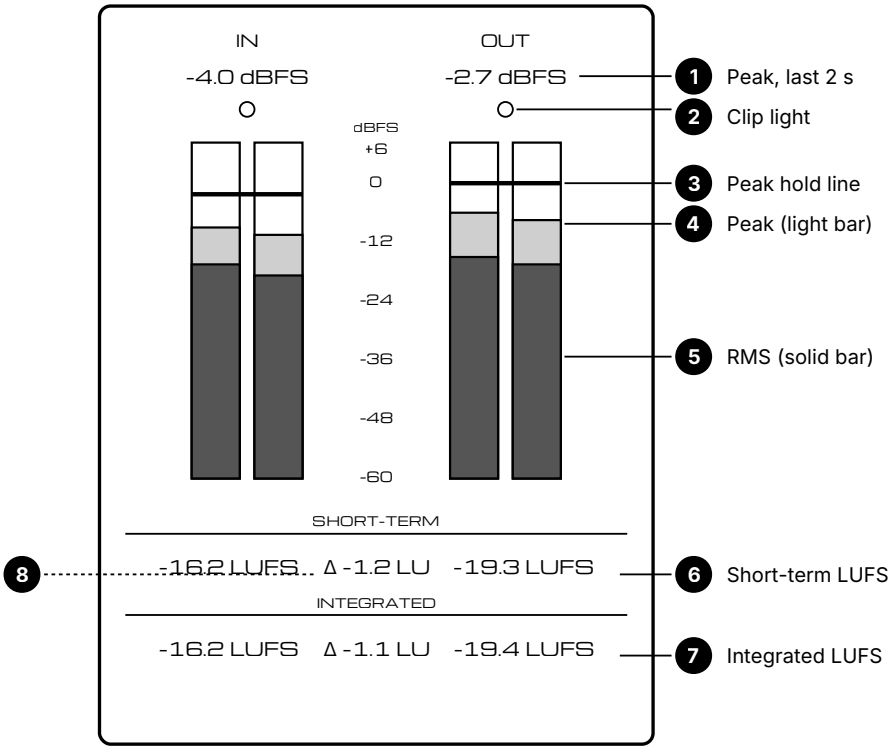


FIGURE 20 The meter bridge, left and right channel bars for input and output, with loudness below.

- 1 **Peak readout:** the highest sample peak of the last two seconds, in dBFS. It turns to a warning above 0 dBFS.
- 2 **Clip light:** lights on any sample at or over full scale. It stays lit until you click the meter.
- 3 **Hold line:** marks the recent peak on the bar.
- 4 **Peak bar** (the lighter part): the instantaneous sample peak of each channel.
- 5 **RMS bar** (the solid part): the average level over 300 ms, closer to how loud it sounds.
- 6 **SHORT-TERM:** loudness over the last 3 seconds, in LUFS, for the input (left) and the output (right).
- 7 **INTEGRATED:** loudness of everything since the measurement started, gated as the ITU-R BS.1770-4 and EBU R 128 standards require.
- 8 **Δ (delta):** OUT minus IN, in LU. It tells you how much louder (+) or quieter (−) VEIRA Multiband Gold made the signal, so you can match levels fairly when you compare with bypass. It reads [--] while either side is too quiet to measure (below −70 LUFS).

The scale: on screen the bars are coloured like a studio console: green below −12 dBFS, yellow from −12 to −3, orange from −3 to 0 and red above 0 dBFS.

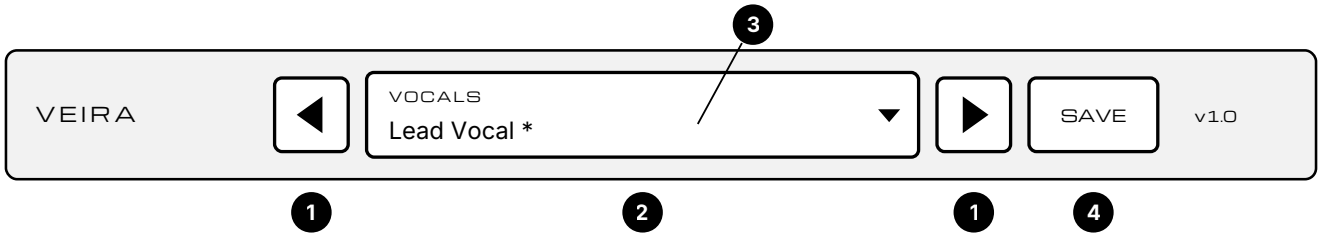
Clicks: click a level meter to reset its hold and clip light. Click the loudness readouts to restart the integrated measurement, for example at the start of a song.

Presets

VEIRA Multiband Gold comes with **40 factory presets** in 10 folders. Each one is a starting point made for a real job. Load one close to what you need, then adjust the first control its note mentions.

The preset browser

The preset browser sits in the header, at the top of the window.



The header: logo and plugin name, then the preset browser, then the version.

FIGURE 21 The preset browser.

- 1 ◀ ▶ step to the previous or next preset, through every folder in order.
- 2 **The display** shows the folder (small, above) and the preset's name. Click it to open the preset menu. Hover over it to read the preset's note: what it's for and what to adjust first.
- 3 **An asterisk (*)** after the name means you've changed something since the preset loaded.
- 4 SAVE stores your current settings as a user preset.

The preset menu

Clicking the display opens a menu with:

- one submenu per **factory folder**, in the order shown below;
- **User Presets**, with your own presets in their folders;
- **Save...**, **Delete** (only for user presets: factory presets can't be deleted), **Rescan** (re-reads the user folder, if you copied presets in by hand) and **Show User Preset Folder** (opens it in Finder or Explorer).

Saving your own presets

1. Set VEIRA Multiband Gold the way you like it.
2. Press SAVE. A dialog opens inside the plugin window.
3. Type a name, choose a folder or type a new folder name, and confirm.

Each user preset is one small .veirapreset file:

	Folder
macOS	~/Library/Audio/Presets/VEIRA/VEIRA Multiband Gold/<Folder>/
Windows	%APPDATA%\VEIRA\VEIRA Multiband Gold\Presets\<Folder>\

Copy these files to move your presets to another computer, or to back them up. Presets keep loading in future versions: any control added later simply starts at its default.

Presets in your DAW

The factory presets also appear in your DAW's own preset or program menu, named *Folder: Name* (for example *Vocals: Lead Vocal*). Whatever preset is selected is saved with your session and comes back when you reopen it, including the asterisk if you'd changed it.

The **Default ▸ Init** preset equals a fresh instance of the plugin: every control at its default.

The factory folders

Folder	Presets
Default	Init
Drums	Drum Bus Control, Kick Tighten, Cymbal Tamer, Room Smash Blend, Snare Body
Bass	Bass Even Lows, Bass Growl Control, Synth Bass Glue, Bass Fret Noise
Guitar	Acoustic Balance, Electric Mid Focus, Fizz Control, Palm Mute Tamer
Keyboards	Piano Evener, Synth Pad Glue, Organ Low Control, Electric Piano Bark
Vocals	Vocal Smooth, Vocal Boxiness, Vocal De-Harsh, Vocal Plosive Control, Rap Vocal Density
Mix Bus	Mix Glue Four Band, Mix Low End Steady, Mix Harshness Guard, Mix Side Control
Mastering	Master Gentle, Master Low End Control, Master Smooth Top, Master Loud Glue, Master Mid Side Glue
Sidechain	Kick Ducks Bass, Kick Pump Lows, Voice Over Duck, Vocal Space In Mix
Creative FX	Heavy Squash, Pumping Mids, Sides Explode, Lo-Fi Radio Band

Levels. The presets were made on tracks peaking at −8 dBFS (bass, guitars, keys, vocals), drums and buses at −4 dBFS and premasters at −3 dBFS. Each band's THRESHOLD is set for that level, so on your material **set each band's THRESHOLD by its card's reduction**. Every preset's OUTPUT was set so it comes out as loud as it went in on matching material (within 0.05 dB, K-weighted), except *Init*, the plain defaults, and the Sidechain presets, which duck by design. Every Mastering preset uses LINEAR PHASE. A few presets aim at sounds that come and go (fret noise, plosives, guitar fizz): on your track, set their THRESHOLD by ear, as their notes say.

Recipes

Each recipe starts from a factory preset; the numbers are a starting point for your track.

Glue for a mix bus

1. Load *Mix Bus* ▸ *Mix Glue Four Band* (crossovers 120 Hz, 1 kHz, 6 kHz; every band about 2:1).
2. Play the loudest chorus. Adjust each band's THRESHOLD until its card shows 1–2 dB on the loud parts.
3. If the low end still moves too much, try *Mix Bus* ▸ *Mix Low End Steady*; if the top gets harsh, *Mix Bus* ▸ *Mix Harshness Guard*.
4. Compare with bypass at Δ INTEGRATED about 0.0 LU.

A drum bus that holds together

1. Load *Drums* ▸ *Drum Bus Control* (kick, body, snare crack and cymbals each held on their own).
2. Solo band 1 and drag CROSSOVER 1 until it holds the kick and nothing above it; un-solo.
3. For a parallel squash, try *Drums* ▸ *Room Smash Blend* (every band squashed, MIX 40 %).

A vocal that stays even

1. Load *Vocals* ▸ *Vocal Smooth* (boom, body, presence and air each held).
2. If loud notes turn harsh, try *Vocals* ▸ *Vocal De-Harsh*, which works only on 2 to 8 kHz.
3. For handling thumps and plosives, *Vocals* ▸ *Vocal Plosive Control* catches them under 150 Hz with a 2 ms attack.

The kick ducks the bass

1. Insert VEIRA Multiband Gold on the bass (or the music bus) and route the kick to its sidechain input.
2. Load *Sidechain* ▸ *Kick Ducks Bass* (EXT KEY on; band 1 at 8:1 under 120 Hz).
3. Set band 1's THRESHOLD until its card dips 6–10 dB on each kick, and RELEASE so the bass is back before the next hit.

Gentle bands on a master

1. Load *Mastering* ▸ *Master Gentle* (LINEAR PHASE, about 1 dB in each band).
2. Keep every band's reduction to 1–2 dB. For a loud master before a limiter, *Mastering* ▸ *Master Loud Glue* holds each band 2–3 dB.
3. If the sides or the top get unruly, try *Mastering* ▸ *Master Mid Side Glue*.

Specifications

Type	Four-band compressor, each band with an optical-style two-stage release
Channels	Mono and stereo, with an optional mono or stereo sidechain input
Crossovers	Three, dragged on the display: 30–500 Hz, 200 Hz–4 kHz and 1–16 kHz (default 120 Hz, 1 kHz, 5 kHz), at least 1.25 × apart. Zero latency: Linkwitz-Riley 24 dB/oct, flat (0.0000 dB) from 25 Hz to 18 kHz. LINEAR PHASE: linear-phase 48 dB/oct, a pure delay
Latency	None; with LINEAR PHASE 1152 samples at 44.1/48 kHz, 2304 at 88.2/96 kHz, 4608 at 176.4/192 kHz, constant, reported to the host
Detector	Each band's power over about 1.6 cycles of its lowest frequency (1–25 ms), both channels linked; or its mid or side; or the key's band
THRESHOLD	−60 to 0 dBFS (default −24.0 dBFS); 10 dB soft knee; at most 40 dB of reduction
RATIO	1:1 to 20:1 (default 2.5:1)
ATTACK	0.5 to 200 ms (default 20 ms)
RELEASE	10 ms to 3 s (default 200 ms); a slow part holds up to 30 % of the reduction (charging over 0.3 s) and lets go over 5 × RELEASE
Measured release	ATTACK 20 ms, RELEASE 200 ms after 2 s of 27 dB: 63 % in 20 ms; half released in 147 ms, 90 % in 1.1 s
MAKEUP	−12 to +24 dB (default 0.0 dB); AUTO: half of what the curve takes from a 0 dBFS sine
Per band	SOLO (left out of offline bounces), BYPASS, STEREO (Stereo, Mid, Side)
MIX	0 to 100 % (default 100 %), against the unprocessed bands, in phase
OUTPUT	−24 to +12 dB (default 0.0 dB)
LINEAR PHASE, EXT KEY	On or off (default off); LINEAR PHASE is not automatable
Metering	BANDS (20 Hz to 20 kHz: spectrum in and out, sixth-octave; the gain now; the reduction; each band's action; hover read-out); each band's reduction on its card (0 to 24 dB); IN and OUT meters (peak, RMS); short-term and integrated loudness per ITU-R BS.1770-4 / EBU R 128
Sample rates	44.1 to 192 kHz
Presets	40 factory presets in 10 folders, plus your own
Window	1200 × 700 points at 100 %; 75 to 200 % or Fit to screen, from the size button, the corner grip or Cmd/Ctrl + = - 0; saved with the session and remembered for new instances
Formats	VST3, Audio Units, standalone; AAX once signed
Plugin ID	Manufacturer Veir, plugin Vmbg

Troubleshooting and questions

The sound drops out for a moment every 30 seconds. The plugin isn't activated on this computer. Open VEIRA Manager and sign in; the strip at the bottom of the plugin's window says exactly what's wrong. See *Getting started ▸ Activation and the licence*.

I don't see VEIRA Multiband Gold in my DAW. Make sure VEIRA Manager shows SHOW (installed) for it, then rescan plugins in your DAW. In Logic Pro, open the Plug-in Manager and choose *Reset & Rescan Selection* if needed. Look under the manufacturer **VEIRA**.

A band shows no reduction. Its THRESHOLD is above the band's level, or its RATIO is 1:1, or the band is bypassed. Many presets leave some bands at 1:1 on purpose. Lower the threshold until the card moves.

EXT KEY is on but nothing ducks. Nothing reaches the sidechain input, or the bands' thresholds are above the key's level. Check the routing in your DAW (see *EXT KEY: the sidechain*), then lower the thresholds.

The band comes back slowly after a loud passage. That is the optical cell: after long, heavy compression its slow part lets go over five times RELEASE. Shorten RELEASE, or raise THRESHOLD so the band works less hard.

The mix sounds different with the plugin in, even with nothing compressing. At zero latency the crossovers turn the phase near the crossover frequencies, as an analog crossover does; the level stays flat. If that matters (on a master, or before a limiter), switch on LINEAR PHASE.

My DAW reports latency, or a track sounds late. LINEAR PHASE is on: it adds 1152 samples at 44.1 or 48 kHz, reported to your DAW, which compensates it. If a DAW doesn't pick up the change straight away, stop and start playback. Switch it off while recording.

I can't automate LINEAR PHASE. It changes the latency, so it isn't automatable on purpose. Set it before you play.

My bounce sounds different from playback. SOLO is left out of offline bounces on purpose. If a band was soloed while you listened, you heard only that band.

Does it work on a mono track? Yes. Mid then works on the whole band and Side has nothing to work on.

The window is too small (or too big) on my screen. Click the size button in the header and pick a size or *Fit to screen*, or drag the bottom-right corner. The size is saved with your session.

How do I type an exact value? Right-click the knob (Control-click on a Mac), type the number and press Return.

Do my sessions keep my settings? Yes. Every control, the crossovers, the selected band, the selected preset and the window size are saved with your session.

Contact: support@veiraaudio.com. Mention your computer (Mac or Windows and its version), your DAW and version, and what you see.



VEIRA Multiband Gold · User Manual · Version 0.1.0

Support: **support@veiraaudio.com** · Web: **veiraaudio.com**

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